microcomputer 6 concludes that a disk does not exist (S17).
Otherwise, it concluds that a disk has been inserted (S16).
It is possible to add the absolute values, which are
above noise level, separately according to the sign of the

5 focus error and to make a decision by comparing the smaller
value with the reference level.

The method for checking the existence of an optical
disk in accordance with the present invention prevents
misjudgment of the existence of an optical disk which are

10 caused by noise contained in focus error signal or low
reflection ratio of a disk.

The invention may be embodied in other specific forms
without departing from the sprit or essential
characteristics thereof. The present embodiments are

15 therefore to be considered in all respects as illustrative
and not restrictive, the scope of the invention being
indicated by the appended claims rather than by the
foregoing description and all changes which come within the
meaning and range of equivalency of the claims are

20 therefore intended to be embraced therein.

What is claimed is:

1. A method for checking the existence of an optical
disk using a focusing signal, comprising the steps of:

(a) checking whether a focus OK signal is asserted
25 while moving an optical pickup in the direction of the
place where an optical disk is placed;

(b) starting detection of the value of focus error if
said focus OK signal is asserted; and

(c) judging the existence of an optical disk,
30 depending upon the magnitude of detected value.

2. The method set forth in claim 1, wherein in said
step (b) said value of focus error is obtained by sampling

said focus error signal at constant intervals and summing the sampled values.

3. The method set forth in claim 2, wherein in said step (b) said summing is carried out on sampled focus error

5 greater than a predefined reference level.

4. The method set forth in claim 1, wherein an optical disk is judged to exist if the magnitude of the detected value is greater than a predefined reference level.

5. A method for checking the existence of an optical

10 disk using focusing signal, comprising the steps of:

(a) examining whether the peak of focus error signal exceeds a predefined reference level, while moving an optical pickup in the direction of the place where an optical disk is placed;

15 (b) detecting the magnitude of focusing signal of which the sign is opposite to the peak, if confirmed in said step (a); and

(c) judging the existence of an optical disk, depending upon the magnitude of detected value.

20 6. The method set forth in claim 5, wherein in said step (b) the detection of the magnitude is carried out by sampling said focus error signal at constant intervals after the peak is detected and summing the sampled values.

7. The method set forth in claim 6, wherein in said

25 step (b) the absolute value of detected level is summed only if the detected level is less than a predefined reference level.

8. The method set forth in claim 5, wherein an optical disk is judged to exist if the magnitude of said

30 detected value is greater than a predefined reference level.

9. A method for checking the existence of an optical disk using focusing signal, comprising:

detecting the magnitude of focus error signal of

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which the level is less than a predefined reference level; and

judging the existence of an optical disk, depending upon the magnitude of detected value.